The Baker Hughes FASTrak™ logging-while-drilling (LWD) fluid analysis sampling and testing service obtains accurate formation pressure and formation fluid samples while drilling. It combines three distinct functions—accurate real-time formation pressure tests, real-time in-situ measurements of reservoir fluid properties, and downhole capture and retrieval of formation fluid samples. Pressure testing provides important information concerning fluid dynamics within the reservoir, including mobility measurements and predictions of productivity of the zone.

Conventional pressure-volume-temperature (PVT) analysis can delay the decision-making process from weeks to months, depending upon the logistics involved in transporting a sample from its acquired location to a PVT laboratory. Because the FASTrak service samples, tests, and analyzes in real time and on-site, you can make critical decisions regarding your reservoir right away, with no delays and no downtime.

The FASTrak service includes sensors that identify real-time density, viscosity, refractive index, and sound/speed measurements. These sensors provide real-time fluid typing as well as real-time cleanup monitoring.

By accurately sampling, testing, and analyzing reservoir fluid properties, the FASTrak service quickly helps in the estimation of reserves in an oil reservoir and helps predict its performance and economics. The FASTrak service precisely measures and reports PVT properties such as bubblepoint pressure, gas/oil ratio, viscosity, and other detailed composition for analysis of well performance, material balance calculations, reservoir simulation, and production engineering calculations. Determining the fluid properties by using the FASTrak service can be essential in petroleum reservoir studies, the design of production equipment, and the estimation of the recovery efficiency of a reservoir.

The FASTrak LWD Fluid Analysis Sampling and Testing Service
Acquire accurate reservoir fluid properties quickly while drilling to optimize production

Applications
- Formation evaluation
- Well placement
- Real-time in-situ measurement of reservoir properties
- Capture and retrieval of formation fluids to surface
- Full formation testing in deviated and horizontal wells, including extended reach and deep water

Features and Benefits
- High-quality fluid analysis, representative fluid samples, and formation pressures
  - Provides information on the production potential of the reservoir
- Baker Hughes SmartPad™ and SmarTest™ continuous-control closed-loop systems
  - Provide highly accurate formation pressure tests
- In-situ fluid analysis
  - Enhances critical decision making based on fluid identification and fluid typing during sampling
- Sample and pressure testing while circulating
  - Reduces risk of differential sticking of bottomhole assembly
- Captures up to 16 single-phase samples
  - Maximizes fluid volume recovered in a single run
- Chemical resistant metallurgy
  - Collects representative fluid samples for geochemical analysis
The FASTrak service stores fluid samples inside sample tanks that are precharged with nitrogen to ensure sample integrity. Each carrier can hold four sample tanks, and as many as four carriers can be assembled per trip to capture 16 fluid samples.

The accurate gradient analysis provided by the FASTrak service yields information on fluid type and density of the formation fluids. Pressure testing by the FASTrak service in an LWD environment optimizes safety and drilling efficiency while controlling overbalance and equivalent circulating density. Representative fluid samples analyzed by the FASTrak service provide information on production potential of the reservoir, the design and development of production facilities, and completion and development costs. Before the capture and retrieval of fluid samples, it must be determined in real time what fluid is being pumped through the tool, and the FASTrak service makes that possible.

Contact your Baker Hughes representative today or visit www.bakerhughes.com/FASTrak to find out how you can acquire accurate reservoir fluid properties quickly to optimize decisions on wellbore construction using our FASTrak LWD fluid analysis sampling and testing service.

The above shows real-time in-situ fluid measurements during cleanup and sampling.